REMARKS

Applicant has carefully reviewed the Final Office Action mailed June 9, 2009 and offers the following remarks.

Claims 1-34 remain pending.

Claims 1-5, 7, 8, 11, 14-22, 24, 25, 28, and 31-34 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,788,702 B1 to Garcia-Luna-Aceves et al. (hereinafter "Garcia"). Applicant respectfully traverses. For the Patent Office to prove anticipation, each and every element of the claims must be present in the reference. Furthermore, the elements of the reference must be arranged as claimed. M.P.E.P. § 2131.

Claim 1 is representative and recites a method comprising:

exchanging scheduling information with at least one compatible communication node in a wireless communication network;

determining a communication schedule for communications with the at least one compatible communication node based on the scheduling information; and

communicating with the at least one compatible communication node based on the communication schedule, wherein communication nodes in the wireless communication network independently determine communication schedules with other compatible communication nodes.

Garcia fails to teach each and every limitation of claim 1. In particular, Garcia does not teach "exchanging scheduling information with at least one compatible communication node" and "determining a communication schedule for communications with the at least one compatible communication node based on the scheduling information," as recited in the claimed invention. In addition, Garcia does not disclose "wherein communication nodes in the wireless communication network independently determine communication schedules with other compatible communication nodes." The Patent Office alleges that Garcia discloses these limitations of claim 1 at column 6, lines 49-62 and column 7, lines 7-20 (Final Office Action mailed June 9, 2009, pp. 2-3). Applicant respectfully disagrees.

Garcia discloses that scheduling packets are exchanged among neighboring nodes and that the neighboring nodes are able to determine transmission schedules from the information received from the scheduling packets (Garcia, col. 6, lines 49-54). The network in Garcia is a synchronized network in which the exchange of scheduling packets should occur within a first number of slots within each frame of time, preferably in a common communication channel

(Garcia, col. 6, lines 55-60). In one embodiment, transmission times and/or channels are scheduled at a node of a computer network according to previously reserved and requested transmission schedules received in packets transmitted by neighboring nodes of the computer network. Such packets are transmitted at the beginning of each frame period within the computer network and transmission times and/or channels are scheduled for periods indicated as being available according to information included in the packets. In one implementation of this scheme, previously reserved transmission schedules have precedence over the requested transmission schedules and conflicts between requested transmission schedules are resolved according to a priority scheme (Garcia, col. 7, lines 7-20).

In contrast, in the claimed invention, the various communication nodes in the wireless access network are configured only to communicate with select compatible communication nodes. Communication links are established between pairs of compatible communication nodes; different communication links may use different modulation, space, time, and/or frequency parameters in order to minimize the potential for one communication link to interfere with other communication links. In this way, the disadvantages of a centralized scheduling scheme are avoided, and there is no need for each of the communication nodes to synchronize to a common time base. Each node will independently determine the communication schedules with its compatible communication nodes.

The network nodes in Garcia are not configured only to communicate with select compatible communication nodes. Garcia is silent as to compatible network nodes; Garcia does not disclose any procedure for determining that nodes are compatible and that scheduling information is exchanged between compatible nodes. Garcia also does not disclose that a communication schedule is determined for communications with compatible nodes based on the scheduling information exchanged between compatible nodes. Thus, Garcia does not teach "exchanging scheduling information with at least one **compatible communication node** in a wireless communication network" and "determining a communication schedule for communications with the at least one **compatible communication node** based on the scheduling information," as recited in claim 1. Since Garcia does not teach each and every limitation of claim 1, claim 1 is thus not anticipated by Garcia.

In response to Applicant's arguments, the Patent Office alleges that Garcia teaches that scheduling packets are exchanged among neighboring nodes of a computer network and that this

is equivalent to the "exchanging scheduling information with at least one **compatible communication node** in a wireless communication network" limitation of the claimed invention (Final Office Action mailed June 9, 2009, p. 25). Applicant respectfully disagrees. The neighboring nodes of Garcia are not necessarily the same thing as the claimed compatible communication nodes. The Patent Office alleges that the definition of compatible communication node is as node than can work together or exchange data with the neighboring node (Final Office Action mailed June 9, 2009, p. 26). Applicant disagrees with this alleged definition. Although the claimed compatible communication nodes are capable of working together and exchanging data, it does not necessarily follow that every node that can exchange information is a claimed compatible communication node. Thus, Applicant respectfully submits that the claimed communication node is not limited to the alleged definition. In addition, the Patent Office has not provided any evidence to support this alleged definition. Garcia does not discuss compatibility of nodes and does not disclose any procedure for determining that nodes are compatible and that scheduling information is exchanged between compatible nodes. Thus, Garcia does not teach "exchanging scheduling information with at least one compatible communication node" and "determining a communication schedule for communications with the at least one compatible communication node based on the scheduling information," as recited in the claimed invention.

In addition, Garcia does not teach that the communication nodes in the wireless communication network independently determine communication schedules with other compatible communication nodes, as recited in claim 1. The nodes in Garcia do not **independently** determine communication schedules. This can be seen from the fact that the network in Garcia is a synchronized network in which the exchange of scheduling packets should occur within a first number of slots within each frame of time, preferably in a common communication channel. Since Garcia is a synchronized network, there must be a common clock and the exchange of scheduling packets is based on a first number of slots within each frame of time as determined by the common clock. The nodes in Garcia thus do not **independently** determine communication schedules.

Moreover, in the embodiment of Garcia disclosed at column 7, lines 7-20, scheduling is done according to previously reserved and requested transmission schedules received in packets transmitted by neighboring nodes of the computer network. The previously reserved

transmission schedules have precedence over the requested transmission schedules and conflicts between requested transmission schedules are resolved according to a priority scheme (Garcia, col. 7, lines 7-20). Since the scheduling is done according to previously reserved transmission schedules, which have precedence over requested transmission schedules, as resolved by a priority scheme, the nodes in Garcia do not independently determine the communication schedule. Instead, in Garcia, the previously reserved schedules and the priority scheme, and not the nodes, determine the communication schedule. Thus, Garcia does not teach "wherein communication nodes in the wireless communication network **independently** determine communication schedules with other compatible communication nodes," as recited in claim 1. Claim 1 is not anticipated by Garcia for this additional reason.

In response to Applicant's arguments, the Patent Office alleges that column 8, lines 35-45 of Garcia discloses that the nodes are configured to maintain working schedules and feasible schedules, and that two or more nodes may be configured to add their own requested communication sessions to their respective working schedules only after verifying availability of time/channel parameters of the requested communication sessions with their respective feasible schedules. The Patent Office alleges that this teaching of Garcia discloses the claim limitation of "wherein communication nodes in the wireless communication network independently determine communication schedules with other compatible communication nodes," as recited in the claimed invention (Final Office Action mailed June 9, 2009, p. 26). Applicant respectfully disagrees.

The newly cited portion of Garcia has nothing to do with the communication nodes **independently** determining communication schedules, as recited in the claimed invention. In the claimed invention, each node will independently determine the communication schedules with its compatible communication nodes. That is not what Garcia teaches. In fact, even in the portion of Garcia cited by the Patent Office, it states that "two or more nodes" may add their own requested communication sessions to their respective working schedules (Garcia, column 8, lines 37-44). So the nodes in Garcia act together, not independently. Further, Garcia discloses a synchronized network in which the exchange of scheduling packets should occur within a first number of slots within each frame of time, preferably in a common communication channel (Garcia, col. 6, lines 55-60). Since Garcia is a synchronized network, there must be a common clock and the exchange of scheduling packets is based on a first number of slots within each

frame of time as determined by the common clock. The nodes in Garcia thus do not **independently** determine communication schedules.

In addition, as discussed above, the scheduling in Garcia is done according to previously reserved transmission schedules, which have precedence over requested transmission schedules, as resolved by a priority scheme (Garcia, col. 7, lines 7-20). Thus, the nodes in Garcia do not independently determine the communication schedule. Instead, in Garcia, the previously reserved schedules and the priority scheme, and not the nodes, determine the communication schedule. Thus, Garcia does not teach "wherein communication nodes in the wireless communication network **independently** determine communication schedules with other compatible communication nodes," as recited in claim 1.

Claims 2-5, 7, 8, 11, and 14-17 depend from claim 1 and include all of the limitations of claim 1. Claims 2-5, 7, 8, 11, and 14-17 are therefore patentable for at least the same reasons set forth above with respect to claim 1.

Claim 18 is directed to a system and recites limitations similar to the limitations of claim 1. Claim 18 is thus patentable for at least the same reasons set forth above with respect to claim 1.

Claims 19-22, 24, 25, 28, and 31-34 depend from claim 18 and include all of the limitations of claim 18. Claims 19-22, 24, 25, 28, and 31-34 are therefore patentable for at least the same reasons set forth above with respect to claim 18.

Claims 6, 9, 10, 12, 13, 23, 26, 27, 29, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Garcia in view of U.S. Patent Application Publication No. 2005/0058151 A1 to Yeh (hereinafter "Yeh"). Applicant respectfully traverses. When rejecting a claim under § 103, the Patent Office must either show that the prior art references teach or suggest all limitations of the claim or explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, published in the Federal Register, Vol. 72, No. 195, pages 57526-57535. The gap between the prior art and the claimed invention may not be "so great as to render the [claim] nonobvious to one reasonably skilled in the art." *Dann v. Johnston*, 425 U.S. 219, 230, 189 U.S.P.Q.(BNA) 257, 261 (1976). In this case, the Patent Office has failed to show where each and every limitation of the claims is taught or suggested by

the prior art. Further, for those limitations of the claims that are not taught or suggested by the prior art, the Patent Office has failed to explain why those limitations would have been obvious to one of ordinary skill in the art.

Claims 6, 9, 10, 12, and 13 depend from claim 1 and include all of the limitations of claim 1. Claims 23, 26, 27, 29, and 30 depend from claim 18 and include all of the limitations of claim 18. As set forth above, Garcia does not teach each and every limitation of claims 1 and 18. Yeh does not cure the deficiencies of Garcia in this regard. Thus, claims 6, 9, 10, 12, 13, 23, 26, 27, 29, and 30 are patentable over the combination of Garcia and Yeh.

In addition, with respect to claims 9 and 26, these claims recite the additional limitation of "wherein the communication nodes in the wireless communication network maintain independent clocks, which are not synchronized with one another." As discussed above, and as admitted by the Patent Office (Final Office Action mailed June 9, 2009, p. 17), Garcia does not teach this limitation. Yeh also does not disclose this limitation. The Patent Office alleges that paragraph 0446 of Yeh teaches this limitation. *Ibid.* Applicant has reviewed paragraph 0446 of Yeh and finds no teaching of communication nodes maintaining independent clocks, which are not synchronized with one another. Paragraph 0446 of Yeh merely discloses that a transmitter, if it does not hear anything above a certain prohibiting threshold, will transmit a short prohibiting signal at a selected position according to its own clock. Thus, Yeh merely indicates that a transmitter may have its own clock. Yeh does not mention that the nodes maintain independent clocks, which are not synchronized with one another, as recited in claims 9 and 26. Yeh is silent as to synchronization. For these reasons, Yeh does not teach "wherein the communication nodes in the wireless communication network maintain independent clocks, which are not synchronized with one another." Claims 9 and 26 are patentable for this additional reason.

In response to Applicant's arguments, the Patent Office now cites for the first time to paragraph 0168 of Yeh as allegedly teaching "wherein the communication nodes in the wireless communication network maintain independent clocks, which are not synchronized with one another." (Final Office Action mailed June 9, 2009, p. 28). Applicant respectfully disagrees.

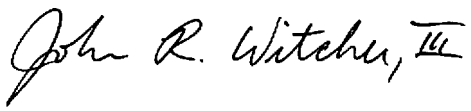
Paragraph 0168 of Yeh does disclose that relative times are specified for the turnaround time and the requested packet transmission time and that synchronization is thus not required (Yeh, paragraph 0168). However, this is not what is claimed. Claims 9 and 26 do not recite that synchronization is not required. Instead, claims 9 and 26 recite that "the communication nodes

in the wireless communication network maintain independent clocks, which are not synchronized with one another." Yeh does not disclose independent, unsynchronized clocks. If anything, Yeh discloses that separate clocks are not necessary since synchronization is not required. Since Yeh does not teach or suggest "wherein the communication nodes in the wireless communication network maintain independent clocks, which are not synchronized with one another," and Garcia admittedly does not teach or suggest this limitation, the combination of Garcia and Yeh does not teach each and every limitation of claims 9 and 26. Claims 9 and 26 are patentable for this additional reason.

The present application is now in condition for allowance and such action is respectfully requested. The Examiner is encouraged to contact Applicant's representative regarding any remaining issues in an effort to expedite allowance and issuance of the present application.

Respectfully submitted,

WITHROW & TERRANOVA, P.L.L.C.

By: 

John R. Witcher, III
Registration No. 39,877
100 Regency Forest Drive, Suite 160
Cary, NC 27518
Telephone: (919) 238-2300

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